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MARKET-PLACE MADONNA of the Congo rests on a heap of raffia, used in basketry

W. K. NORTON

W. K. NORTON

the world's mighty rivers, the Congo. A vast system of its tributaries veins most of the Belgian Congo. They mirror jungles that still defy those who would exploit or explore. They also pass cities like the capital, Léopoldville, with skyscrapers of advanced design.

Few countries are richer in minerals. Copper, gold, silver, tantalum, and tin go by rail to the Congo, then by ships to the sea—and markets of the world. During World War II, pitchblende to make radium was shipped in secret to the United States. Now mines like Shinkolobwe, Katanga Province, move

IVORY TUSKS from Congo elephants are sawed into chunks, then carved intricately by Bolobo tribesmen. Ivory's trade value helped build gleaming structures like "Le Building," below, in Léopoldville.

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into high gear, helping the Belgian Congo supply most of the world's uranium and radium. The Congo ranks first as a source of cobalt, vital in watch springs, stainless steel, and other alloys. It is the chief producer of industrial diamonds, and ranks fifth in copper.

Machines rip these mineral riches largely from the Katanga Province, in the south, near Rhodesia's border. This region marketed little but slaves and ivory a few decades ago and, like the rest of the Congo, was steeped in tribal ways.

In 1885, soon after Stanley found Livingstone and explored the Congo River, a Conference of European Powers met in Berlin and agreed to set up a Congo Free State under the authority of King Leopold II of Belgium. Stories of cannibals, wild animals, and witchcraft gave the colony an air of mystery.

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Belgium's Booming Congo

THE whistle of the *Reine Astrid* echoes across the Congo. Paddling near, Africans in European shirts and shorts barely glance up at the huge, Mississippi-style river boat. Here in the Belgian Congo, people take for granted the sights and sounds of the white man's world.

Within the memories of our fathers this land of rain forest, plains, and bush was wilderness. Now tractors carve farms, row by row, from hills where gorillas and elephants roamed. Trucks, bulldozers, and mining machinery raise few eyebrows among primitive tribesmen in those regions where minerals abound. Pygmies, Bantus, and Watusi are watching their giant land wake up. They are learning why mineral-rich clods of earth are prized above skins and ivory.

Nearly a third the size of the United States, the Belgian Congo rolls from low plateaus to mountains in Central Africa. Despite much tropic heat, some high regions, cool and dry, feel like southern California. In the east, on the Uganda border, loom the snowy peaks of the Ruwenzori, or "Mountains of the Moon," topping 16,000 feet, and south of them the Virunga volcanoes, nearly as high. Streams twist down from these and lesser slopes to swell into one of

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MABEL OLIVER

Dingo—Australia's Wild Dog

THIS canine mother, placidly suckling her pups, is no best friend of man. In Australia, where she and her kind range thousands of miles of sparsely settled "outback," she's just about public enemy number one to sheep raisers.

She is a dingo, strange and viciously destructive wild dog that haunts hot, semiarid regions near the heart of Australia, killing thousands of valuable sheep ruthlessly—often senselessly. In defense, a wall of wire mesh is being strung around the vast sheep-growing areas of Queensland, New South Wales, and South Australia. One continuous fence will stretch some 5,200 miles.

Dingo, also known as warragal, is a fiercely handsome, wolflike dog, standing about two feet tall on short, rugged legs, and stretching some five feet from nose to tip of tail. Probably dingoes first entered Australia with the earliest aborigines, crossing the land bridge that once joined the continent to Asia. Curiously, dingo pups can be raised to become loyal, affectionate pets, patient and trustworthy with small children. Yet few animals are more savage than dingoes in a hunting pack.

Padding silently across saltbush flats, mostly at night, the varicolored dogs often herd sheep expertly into a cul-de-sac. Then they attack, slashing with long fangs, wrenching at the throats of their victims, sometimes flipping a full-grown sheep in order to snap its neck. Not bothering to feed, they often kill, then kill again—apparently for the fun of it. Coordinating their attacks, dingoes can bring down cattle and will even take on humans if the odds are right.

Besides fencing them out, Australians shoot them, trap them, even airdrop poisoned meat to them. But dingoes have survived for a long time in the island continent and seem likely to keep on doing so, reminding the sheep raisers that dogs came to Australia before sheep.—E.P.

UMI

Then giant corporations, largely controlling the country's development, began to prosper. Congo villages grew to cities. Elisabethville, capital of the Katanga Province, has built modern hospitals, scientific laboratories, social welfare institutions. Economy still booms—and the Congo looks to American investors.

Growing up has brought schools and better health. The sprawling Congo basin holds countless tribes, all with their own tongue, their own habits of life and dress. Tall Watusi of Ruanda-Urundi, regal and warlike, had little in common with tiny Pygmies or the many Bantu tribes. Today, more than a million Congo children go to school for the first time. Léopoldville's new native university teaches medicine and veterinarian, agricultural, and administrative sciences. Many a witch doctor still stamps and gestures—but a few miles from his chants and brews a gleaming hospital steals first one patient, then others. Bit by bit, the many tribes knit closer together to form one fabric, one nation.

In 1948, Belgium founded a research institute to help make the most of natural resources in the Congo. Now contoured and terraced hillsides contrast with eroded wastelands in neighboring parts of Central Africa. Scientific research teaches the Congo to grow more cotton, rubber, coffee, cocoa, and sugar.

With all its wealth, this land, in parts, is breath-takingly beautiful. On the slopes of the Ruwenzori, giant bamboo grows 100 feet tall. Higher up, weird forests of giant heather seem to belong on another planet. Mists shroud these huge bushes. Lichens hang from their branches like beards. Deep moss carpets take on unearthly colors in the damp air. The great American naturalist, Carl Akeley, who died and is buried in the Ruwenzori, called these heights "the most beautiful place in the world."

Such marvels have spurred the Belgian Government to set up one of Africa's strongest national park systems. Some park areas may not be visited *except* in the interest of science.—J.A.

SCALPING A MOUNTAIN in Ruanda, Congo laborers, supervised by Belgian engineers, scour the brick-red earth for black cassiterite, an ore yielding 76 percent pure tin

INCOBEL

A GREAT sand pile lies cradled between outstretched arms of New Mexico's Rocky Mountains. Rolling dunes of incredibly white, surprisingly soft gypsum sand spread across 275 square miles of Tularosa Basin in the south-central part of the State. This billowy sea of white is the world's largest surface deposit of gypsum. Mixed with water, gypsum becomes plaster of Paris. It goes into such construction materials as plasterboard and cement.

Pelting rain and melting snow dissolve the gypsum content from the steep flanks of the San Andres Mountains. The solution pours into near-by Lake Lucero. When the water evaporates, transparent selenite crystals form to lace the lake's edge. Sweeping winds do the rest, knocking crystals loose, sending them bouncing along to splinter into tiny particles, heaping them into mounds. A dune is born.

Children tumbling down a gypsum dune (right) find the stuff different from beach sand. It is dead-white and unpleasant to taste. It crumbles to powder between young fingers. Ground water, hiding just beneath the surface (right), is too "gyppy" to drink.

Nature has produced a glittering wonder at White Sands, and the United States government protects and maintains it as a national monument. But man's science, also government-sponsored, shares top billing in this part of New Mexico. Missile testing centers of the armed forces dot the flatlands. Holloman Air Force Base, bordering the monument area, tests "birds" like the Viking 9, left.

Thirty miles to the southwest, men at the Army's White Sands Proving Ground fire missiles northward along a 100-mile corridor. Farther to the south, antiaircraft and artillery missiles pierce the sky above the Army's Fort Bliss range.

White Sands carved its place in history 12 years ago with a blast that still echoes around the world. It was near the dunes that the first A-bomb was tested, blazing a pathway into the Atomic Age.—A.P.M.

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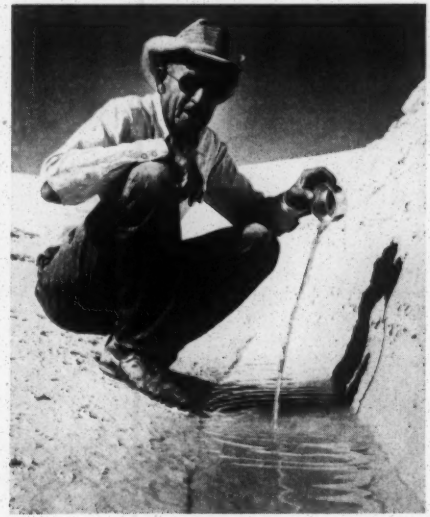

RIGHT, WILLIAM BELKNAP, JR.

WILLIAM BELKNAP, JR.

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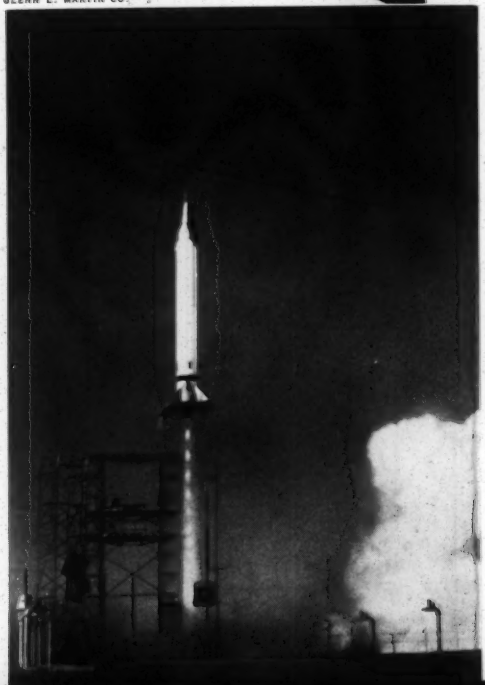


New Mexico's Waterless Ocean

VISITORS PLAY IN ITS WAVES AS ROCKETS ROAR OVERHEAD

dinians seem more Spanish than Italian. Their dignity and reserve contrast with vivacious emotions of Italian mainlanders. They have a sense of chivalry, of deep loyalties and instinctive hospitality.

Sardinia has gained fame from tiny fish and tiny donkeys. Sardines, once swarming in near-by waters, gave the island its name. And along winding, dusty country roads, or over cobbled village streets, clatter the miniature hoofs of Sardinian donkeys, among the world's smallest. Some grow hardly larger than sheep dogs. From Sardinia, too, comes the term, "sardonic laughter." Legend held that people who ate a certain island herb would die of laughter.

Wheat fields and vineyards pattern the island's hills. Shepherds press bulging cartloads of goat's cheese on their way to market. Much of it is exported to the mainland. But a long history of land ruin plagues Sardinia's farmers. Rainfall digs gullies into slopes that were long ago cleared of trees. Landslides rumble down lower hillsides. Centuries of hot, rainless seasons have baked plains such as the Campidano of Cagliari that once provided wheat for ancient Rome. Sardinia now looks hopefully to a new era of irrigation and water-power projects, with machinery replacing horses and oxen.

The island is getting needed help. Its malarial swamps have threatened health since Roman emperors sent political enemies to Sardinia to die. Now the Rockefeller Foundation is helping to drain swamps and spray buildings.

Not so long ago, those daring to visit Sardinia risked more than malaria. Bandits lurked throughout the country. Some islanders, closer to medieval ways than to modern, made banditry a way of life. They had their code of honor, often leading to acts of vengeance. But Sardinia's bandits have vanished like the smoke from their guns. Dark-eyed children of the hills are sweating blood over math problems rather than watching it spilled in vendettas.

While new knowledge changes Sardinia's way of life, ancient wealth helps fill the island's pocketbook. Old mines yield zinc, lead, copper, and other minerals. Fishing boats, coming home to such villages as Castel Sardo (left), bring rich catches of tuna and lobster.

HYMAN CHARNIAK

An ancient stone watchtower perched austerely at the sea's rocky edge has stood vigil through thousands of years, gazing across the Gulf of Asinara for a glimpse of alien sails. Now the tower spots the smoke of ships ferrying tourists. And the island blinks a little dazedly at the impact of these new invaders.

But it's a sure bet that Sardinia's tiny donkeys will trip over the cobbles as before; that shepherds will still dwell in hillside huts, living on sour milk and hard biscuits as they did in the days of Homer.—J.A.

Sardinia

'Unconquered Island' Yields To New Invasion of Tourists

ELEGANT regional costumes haven't vanished entirely from Sardinia. Now that dread of bandits and malaria has dwindled, swelling flocks of tourists will marvel at the hand-woven fabrics and elaborate embroidery of Sardinian costume. But such clothing is just a souvenir of the island's long, curious history.

About as big as New Hampshire, this second-largest island in the Mediterranean (Sicily comes first) lies some 150 miles west of Italy's mainland. Part of the Italian Republic, Sardinia is severed from France's Corsica only by a thin strait.

Inland from the rocky coast line sprawls a wild interior where shepherds in mountain huts cling to customs that go back to pre-Christian days. Their costumes appear at festival time, when, in some remote villages, celebrants sing plaintive, minor-key songs that seem linked with early Phoenician music. Yet Cagliari, the capital, and other Sardinian towns boast neon lights, television, and new hotels.

GEORGES VIOLLON

HYMAN CHARNIAK

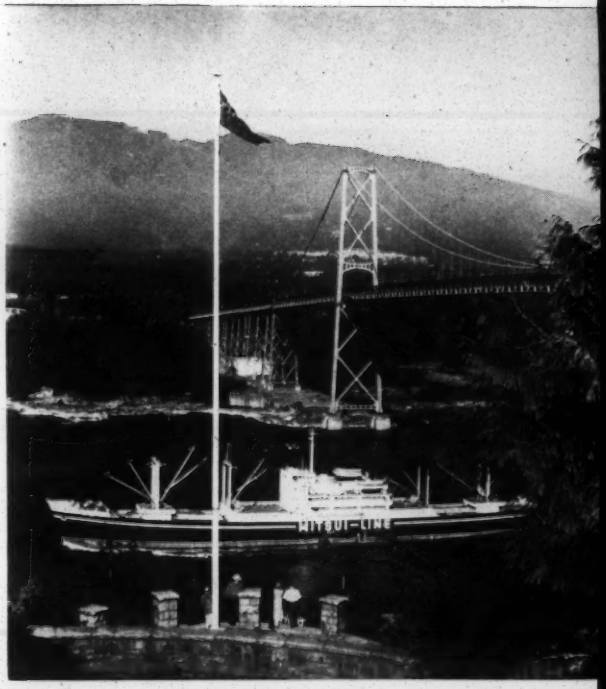
Humans have lived on Sardinia longer than history has been written. Sprinkled over the island, thousands of conical stone towers survive from the Bronze Age. Their builders, founders of a mysterious *nuraghi* culture, baffle archeologists.

After this dim prehistory came invasions by Carthage, Rome, Vandals, and others. But despite the mixture of cultures, some 1,300,000 Sardinians retain unique racial characteristics. D. H. Lawrence calls Sardinia "the unconquered island."

Small, dark, and fine-featured, Sar-

from warm waters of the North Pacific by prevailing westerly winds. It's also a climate for umbrellas. Each year, Vancouver is doused by some 58 inches of rain, mostly in winter months.

Within a few miles of the city are island-studded inlets to explore in boats. Cougars and grizzly bears thrash through near-by forests. Below hillside "grandstands," great trans-Pacific liners heave their outbound wash against stumpier tramp freighters. A clean-lined Japanese ship is a startling sight passing beneath Lions Gate Bridge (right). To reach the Pacific it must continue down the First Narrows, enter the Strait of Georgia, then swing northwest through the Strait of Juan de Fuca, between Vancouver Island and Washington's Olympic Peninsula.



NATIONAL GEOGRAPHIC PHOTOGRAPHER J. BAYLOR ROBERTS

Thousands may hear a symphony or musical show in 900-acre Stanley Park, a brisk 10-minute walk from downtown Vancouver. In this water-rimmed public garden, immense firs tower above roses. Stanley Park's bathing beaches vie for interest with miles of trails, a cricket ground, zoo, and golf links. Totem poles appear suddenly, their fantastic faces and figures stimulating chuckles, questions, and imitations (left).

RALPH GRAY, NATIONAL GEOGRAPHIC STAFF

Many Canadians regard bustling Vancouver as characteristically Yankee. Actually, the city blends many traits. It has open markets, packed with oversized vegetables and fruits. It has store windows displaying luxury wares in the manner of Fifth Avenue. Among its skyscrapers, some 41 nationalities brush elbows. Some wear farm clothes fragrant with the scent of grains and fresh lumber. Others stroll in English tweeds mellowed by rain, wear, and pipe smoke.

Vancouver rings with taxi horns, night club bands, chiming church bells, hoarse ship horns, and medleys of tongues. People breathe deeply there, alive with the freshness of sea, evergreens, and mountains. They find the present good. The future looks better.—S.H.

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VANCOUVER——

City That Logs Built

HE'S as tough as the trunk of a Douglas fir. He's as sure-footed as the squirrel that leaps through its branches. He's a logger—as much a part of Vancouver as the sky line behind him.

Logs and wood products largely made this British Columbia city Canada's third-largest metropolis and second-busiest port after Montreal. Three hundred and fifty thousand Vancouver citizens seldom tire of the sight of slow-moving log booms, sometimes stretching 10 or 15 acres, inching along narrow mountain fiords to Vancouver mills.

Some can remember Vancouver as an anthill collection of squatters' shacks —a sawmill community. Now the city sprawls 25 miles north of the United States border, between Burrard Inlet, off the Strait of Georgia, and the mouth of the Fraser River. Pacific Ocean routes to Far Eastern markets fan from Vancouver's western doorway. Behind the snow-capped Coast Mountains, creased against Vancouver's boundaries, spread Canada's highlands and prairies with resources of lumber, furs, minerals, grain, and oil. These products funnel into Vancouver for processing and shipment. When the Panama Canal opened, the port's future was assured. It was cheaper to transship grain from there to Europe via the canal than by way of Winnipeg and the eastern ports.

Vancouver's mountain cup provides a sheltered harbor with nearly 100 miles of shore line. The deep growls of ocean-going vessels reverberate over the harbor from more than 40 berths. Behind the wharves rumble railroad cars jammed with more products for the city's maw. Oil flows in a pipeline from Alberta's rich fields. Threats to the Suez Canal, logical corridor for Near East petroleum, have increased the importance of Canadian oil—and kept Vancouver busy.

Vancouver welcomes whatever business comes. But its people count other blessings besides prosperity. These include a mild climate—though the city lies farther north than winter-whitened Quebec. Any rosebush owner may pick flowers on Christmas Day. The phenomenon results from the transfer of heat

Vancouver Harbor: An Open Window on Canada's Mountain-Walled Pacific Coast

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